

AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions and listings of claims.

1. (Cancelled)
2. (Previously Presented) An apparatus for use in humidified gases delivery treatment comprising:
 - a housing,
 - a removable humidification chamber with a base,
 - a gases line inlet in said housing to receive pressurised gases from a pressurised gases source, said gases line inlet adapted to make a separable fluid connection with a breathing conduit,
 - a gases outlet in said housing in fluid connection with said gases line inlet, adapted to make a separable fluid connection with an inlet of said humidification chamber in order to provide gases flow into said humidification chamber,
 - a humidified gases return in said housing, adapted to make a separable fluid connection with an outlet of said humidification chamber in order to receive humidified gases from said humidification chamber,
 - a gases line outlet in said housing, in fluid connection with said humidified gases return, adapted to make fluid connection with or in fluid connection with a breathing conduit for delivery of humidified gases to a patient,
 - a chamber heater in said housing for vaporising liquid water in said humidification chamber in order to provide water vapour to gases flow passing through said humidification chamber,
 - said housing adapted to accommodate a humidification chamber, said humidification chamber being removable and engagable with said housing via a single motion, said single motion of engagement urging the base of said humidification chamber adjacent and in contact with said chamber heater, said single motion also making or breaking said separable connections between said gases outlet and said humidification chamber inlet, and said humidified gases return and said humidification chamber outlet.
3. (Original) An apparatus for use in humidified gases delivery treatment as claimed in claim 2 wherein

said gases outlet and said inlet of a said humidification chamber have between them first complementary male and female connectors, having a preferred insertion direction for completing a fluid connection by engagement of the male and female connectors,

said humidified gases return and said outlet of a said humidifier have between them second complementary male and female connectors, having a preferred insertion direction for completing a fluid connection by engagement of a male and female connectors said preferred insertion direction of said first connectors being the same as said preferred insertion direction of said second connectors, and being the same as at least the direction of a terminal part of said single motion.

4. (Original) An apparatus for use in humidified gases delivery treatment as claimed in claim 3 wherein said inlet of a said humidification chamber and said outlet of a said humidification chamber are each a female port, and

said gases outlet and said humidified gases return are each a resilient tubular projection fitting within respective female ports with said humidification chamber engaged.

5. (Original) An apparatus for use in humidified gases delivery treatment as claimed in claim 4 wherein said resilient tubular projections of said gases outlet and said humidified gases return have parallel axis of extension, said chamber heater is a substantially planar heating plate, and said axis of extension of said tubes are at least substantially parallel with said direction of single motion.

6. (Currently Amended) An apparatus for use in humidified gases delivery treatment as claimed in ~~any one of claim~~[[s]] 2 to 5 wherein said gases line outlet includes a connector for receiving a breathing hose and at least one auxiliary electrical connection plug or socket or pneumatic connection plug or port, for a simultaneous connection when connecting a breathing circuit having complementary electric or pneumatic connectors.

7. (Currently Amended) A humidifier chamber for use with a gases humidification apparatus, the humidifier chamber comprising:

a container defining a water chamber having an aperture in the bottom, with a surrounding wall and top,

a heat conductive base enclosing said aperture in the bottom of said water chamber,

a gases inlet to said container adapted to receive a substantially horizontal flow of gases into said container,

a gases outlet from said container adapted to deliver a substantially horizontal flow of gases out of said container,

said gases inlet and said gases outlet being ~~parallel and~~ aligned, such that said humidifier chamber may make operable engagement with a humidified gases delivery apparatus in a single motion, and

at least one extension tube extending horizontally inward into said humidifier chamber from an inner periphery of said gases inlet and/or gases outlet,

wherein said single motion ~~urging~~ disposes said heat conductive base adjacent ~~and in contact with~~ a heater of said humidified gases delivery apparatus.

8. (Previously Presented) A humidifier chamber as claimed in claim 7, wherein said gases inlet and said gases outlet are each a female port, and

said humidifier chamber is generally cylindrical including a cylindrical wall, and said female ports open out to the cylindrical wall near the top of the chamber.

9. (Previously Presented) A humidifier chamber as claimed in claim 8 wherein at least a terminal part of said single motion is parallel to the said base of said chamber, and said terminal part of said single motion completes connections with said gases inlet and said gases outlet.

10. (Currently Amended) A humidifier chamber as claimed in claim 7, wherein the at least one extension tube comprises including an elongate inlet extension tube extending into said humidifier chamber from an inner periphery of said gases inlet, and an elongate outlet extension tube extending into said humidifier chamber from the inner periphery of said gases outlet, ~~and said inlet extension and said outlet extension tubes being substantially parallel to each other, and substantially parallel to said base of said chamber.~~

11. (Previously Presented) A humidifier chamber as claimed in claim 10 wherein, said outlet extension tube includes an air bleed aperture, said air bleed aperture being located in

the top of said outlet extension tube, and located toward the end of the outlet extension tube adjacent said gases outlet.

12. (Cancelled)

13. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claim 2 wherein said housing includes a connection manifold.

14. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claim 13 wherein said connection manifold comprising:

said gases line inlet adapted to make a fluid connection with a breathing conduit in order to receive pressurised gases,

said gases outlet adapted to make a separable fluid connection with an inlet of a humidification chamber in order to provide gases into said humidification chamber,

said humidified gases return adapted to make a separable fluid connection with an outlet of said humidification chamber in order to receive humidified gases from said humidification chamber.

said gases line outlet in fluid connection with said gases return, said gases line outlet adapted to make a fluid connection with a breathing conduit for delivery of humidified gases to a patient,

said separable connections being made or broken by a single motion of said humidifier chamber being placed adjacent to said manifold.

15. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claim 14 wherein said manifold includes a passage between said gases line inlet and said gases outlet.

16. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claim 14 wherein said manifold includes a passage between said humidified gases return and said gases line outlet.

17. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claimed claims 15 or 16 wherein said passages are internal to said connection manifold.

18. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claim 13, wherein said manifold is removable from said housing.

19. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claim 2 wherein said humidified gases return and said gases line outlet are separable from said apparatus.

20. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claim 19 wherein said apparatus includes an elbow tube having an inlet and an outlet, said elbow tube inlet comprising said humidified gases return and said elbow tube outlet comprising said gases line outlet.

21. (Previously Presented) An apparatus for use in a humidified gases delivery treatment as claimed in claim 20 wherein said housing includes a recess to accommodate and engage said elbow tube, said recess including a constriction within it, said constriction holding said elbow tube in said recess.

22. (Previously Presented) A humidifier chamber as claimed in claim 10 wherein said opening of said elongate inlet extension tube faces a direction transverse to an axis of said elongate inlet extension tube, and said opening of said elongate outlet extension tube face a direction transverse to an axis of said elongate outlet extension tube.

23. (Previously Presented) A humidifier chamber as claimed in claim 22 wherein said transverse direction is not downwards.

24. (New) A humidifier chamber as claimed in claim 7, wherein said gases inlet and said gases outlet are parallel to each other.

25. (New) A humidifier chamber as claimed in claim 7, wherein said at least one extension tube is releasably coupled to said container.

26. (New) A gas humidification apparatus comprising:
a humidification chamber comprising a base, and
a housing comprising:

a source gases outlet adapted to make a separable fluid connection with an inlet of said humidification chamber in order to provide gases flow into said humidification chamber,

a humidified gases inlet adapted to make a separable fluid connection with an outlet of said humidification chamber in order to receive humidified gases from said humidification chamber,

a humidified gases outlet in fluid communication with said humidified gases inlet, said humidified gases outlet adapted to make fluid connection with a breathing conduit for delivery of humidified gases to a patient, and

a heater configured to vaporize liquid water in said humidification chamber to provide water vapor to gases flowing through said humidification chamber,

wherein said housing is adapted to accommodate said humidification chamber, said humidification chamber being removable and engageable with said housing via a single motion, wherein said single motion of engagement disposes the base of said humidification chamber adjacent said heater, said single motion also making or breaking said separable connections between said source gases outlet and said humidification chamber inlet, and said humidified gases inlet and said humidification chamber outlet.

27. (New) A gas humidification apparatus as claimed in claim 26, wherein the housing further comprises a source gases inlet for receiving gases from the surroundings or a gases source line.